

Preventive Interventions for Central Venous Catheter Infections in Intensive Care Units: A Systematic Literature Review

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Abstract : Introduction: Catheter-related bloodstream infections are a major burden for healthcare and patients. Although infections of this type cannot be completely avoided, they can be reduced by taking preventive measures. The aim of this study is to review and analyze the existing literature on preventive interventions to prevent central venous catheters (CVC) infections. Methods: A systematic literature review was carried out. The international databases CINAHL, Medline, PubMed, and Web of Science were searched using the search strategy: "catheter-related infections" AND "intensive care units" AND "prevention" AND "central venous catheter." Articles that met the inclusion and exclusion criteria were included in the study. The literature search flow is illustrated by the PRISMA diagram. The descriptive research method was used to analyze the data. Results: Out of 554 search results, 22 surveys were included in the final analysis. We identified seven relevant preventive measures to prevent CVC infections: washing the whole body with chlorhexidine gluconate (CHG) solution, disinfecting the CVC entry site with CHG solution, use of CHG or silver dressings, alcohol protective caps, CVC care education, selecting appropriate catheter and multicomponent care bundles. Discussion and conclusions: Both single interventions and multicomponent care bundles have been shown to be currently effective measures to prevent CVC infections in adult patients in the ICU. None of the measures identified stood out in terms of their effectiveness. Prevention work to reduce CVC infections in the ICU is a complex process that requires the simultaneous consideration of several factors.

Keywords : central venous access, critically ill patients, hospital-acquired complications, prevention

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